



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,285	01/25/2002	Koji Ikeda	5077-000082	3463
27572	7590	10/03/2003		
HARNES, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303				
			EXAMINER	
			SHAH, MANISH S	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/057,285

Applicant(s)

IKEDA ET AL.

Examiner

Manish S. Shah

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-37 is/are allowed.
- 6) ☒ Claim(s) 1,2,5-7,9 and 14-17 is/are rejected.
- 7) ☒ Claim(s) 3,4,8,10-13 and 18-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-2, 5-7 & 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Barry et al. (# US 5596416).

Barry et al. discloses a recording device configured so as to record an image on a recording medium according to image data, the recording device including two or more recording parts for recording an image on a recording medium (figure: 2, element: 36,38,40), at least one feeding part for supplying record media to each of the recording part (element: 78, 80, figure: 2), and delivering part for holding image-recorded record media delivered from each of the (figure: 2), wherein a plural recording parts concurrently record images on different record media so that the processing of image ranging over two or more record media can be shared between the plural recording parts (column: 4, line: 1-65; column: 7, line: 50-67). They also disclose that the delivering part is configured as to hold the record media, which have been image recorded in each of the plural recording part, in such a way that the image-recorded record media are stacked on top of one another in a specific sequence (figure: 2, column: 5, line: 14-67; column: 6, line: 1-45). They also disclose that the when any one

Art Unit: 2853

of the recording part is incapable of recording image, another one of the plural recording part is capable to record the image on the record medium (column: 8, line: 28-35; column: 16, line: 15-25). They also disclose the three print engine connect parallel to each other and all stack one on top of each other (column: 3, line: 55-60), and which has a single power supply for switch on and off electric power.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 15 & 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Terauchi et al. (# US 6474806).

Terauchi et al. discloses an ink jet recording device configured so as to record by emitting in onto record medium according to image data, wherein two or more unit-like recording part (element: 104a-104e, figure: 1, element: 300a-300e, figure: 3), each of them having the ink jet head (element: 204, figure: 2, 5) for emitting ink are stack together on top of one another in an up and down direction (figure: 1, 3), and where in opening (element: 100, figure: 1-5), through which maintenance work is performed on each unit-like recording part is formed in a side of the recording part (column: 12, line: 50-55). They also discloses the access cover capable of opening and closing the opening of each unit like recording part, wherein the plural recording unit are provided with a single common access cover (figure: 4; column: 4, line: 12-26).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et al. (# US 5596416) in view of Barry et al. (# US 5859711).

Barry et al. (416) discloses the all the limitation of the recording device except that the plural recording part each have two operating mode one of which is first mode in which the plural recording parts share the processing of image data and other is a second mode, in which each of the recording part individually process the image data.

Barry et al. (711) teaches that to get the faster processing recording device has the plural recording part each have two operating mode one of which is first mode in which the plural recording parts share the processing of image data and other is a second mode, in which each of the recording part individually process the image data (column: 10, line: 34-67; column: 11, line: 40-67; column: 12, line: 1-35).

It would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the recording device of the Barry et al. (416) by the aforementioned teaching of Barry et al. (711) for the purpose of to process the recording device faster than the regular recording device.

4. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Terauchi et al. (# US 6474806) in view of Horie et al. (# US 5208640).

Terauchi et al. discloses all the limitation of the ink jet recording device except that an access cover capable of opening and closing the opening of unit like recording part, wherein recording part provided with a respective access cover.

Horie et al. teaches that to get the easy access to remove jam paper from the recording device has the access cover capable of opening and closing the opening of unit like recording part, wherein recording part provided with a respective access cover (element: 32, figure: 2; column: 5, line: 60-68).

It would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the ink jet recording device of the Terauchi et al. by the aforementioned teaching of Horie et al. for the purpose of easily remove the jam paper from the unit-like recording part.

***Allowable Subject Matter***

5. Claims 3-4, 8, 10-13 & 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

(1) With respect to claim 3-4, the delivering part includes a bin capable of moving between the plural recording parts to receive the recording media, and is configured such that record media, which has been image recorded in each of the plural recording parts are stacked on top of each other in a specific sequence on the bin by causing the bin to move in association with the time of completion of the recording of an image in each the recording part. It is this limitation, expressed in the claimed combination not found, taught or suggested in the prior art, that makes these claims allowable over the prior art.

(2) With respect to claim 8, the plural recording part are configured such that the timing at which the power consumption of each the recording part increases to a maximum is differed from that of every other recording part by adjustment of the operating timing of recording. It is this limitation, expressed in the claimed combination not found, taught or suggested in the prior art, that makes these claims allowable over the prior art.

(3) With respect to claim 10, the two or more power supply switches for switching on and off the supply of the electric power to the recording parts are provided in association with the recording parts. It is this limitation, expressed in the claimed combination not found, taught or suggested in the prior art, that makes these claims allowable over the prior art.

(4) With respect to claims 11-13, a single displaying means for displaying all the recording part operating status or two or more displaying means for displaying the each individual recording part operating status. It is this limitation, expressed in the claimed

combination not found, taught or suggested in the prior art, that makes these claims allowable over the prior art.

(5) With respect to claims 18-19, each of the unit-like recording part is provided with the ink tank for holding the ink that is supplied to the ink jet head, wherein maintenance works on each the unit-like recording part is the replacement of the ink tank. It is this limitation, expressed in the claimed combination not found, taught or suggested in the prior art, that makes these claims allowable over the prior art.

(6) With respect to claim 20, each of the unit-like recording part is provided with feeding part for recording medium, wherein the maintenance work on each the unit like recording part is supply of recording medium to the feeding part.

6. Claims 21-37 are allowed.

The following is an examiner's statement of reasons for allowance:

7. The primary reason for allowance of claims 21-25 is that applicant's claimed invention includes an ink jet recording device configured so as to record by emitting ink onto the recording medium, recording device including two or more recording parts of which provided with an ink jet recording head for emitting ink and single tank for holding ink that is supplied to each of the ink jet head. It is this limitation, expressed in the claimed combination not found, taught or suggested in the prior art, that makes these claims allowable over the prior art.

8. The primary reason for allowance of claims 26-27 is that applicant's claimed invention includes an ink jet recording device configured so as to record by emitting ink



onto the recording medium, wherein two or more unit-like recording part, each of having an ink jet recording head for emitting ink are stacked together on top of each other in an up and down direction, and wherein the recording parts are configured such the ink jet head of the recording parts are reciprocated out of phase with respect to each other so as to reduce vibration due to the reciprocating movement of the other ink jet head. It is this limitation, expressed in the claimed combination not found, taught or suggested in the prior art, that makes these claims allowable over the prior art.

9. The primary reason for allowance of claims 28-35 is that applicant's claimed invention includes a sorter with two or more bins each having an upward loading surface on which a recording medium is loaded, wherein recorded media loaded on the different bins so that it can sorted, including a transferring means for transferring a record medium between the plural bins. It is this limitation, expressed in the claimed combination not found, taught or suggested in the prior art, that makes these claims allowable over the prior art.

10. The primary reason for allowance of claims 36-37 is that applicant's claimed invention includes a sorter with two or more bins each having an upward loading surface on which a recording medium is loaded are arranged side by side, wherein recorded media loaded on the different bins so that it can sorted, wherein the bins are each movably configured so that the order in which the bins are arranged can be changed. It is this limitation, expressed in the claimed combination not found, taught or suggested in the prior art, that makes these claims allowable over the prior art.

**Conclusion**

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


(1) Lin (# US 5764263) discloses the ink jet recording apparatus using the two ink jet recording part, with two ink tanks (figure: 2).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (703) 305-1562. The examiner can normally be reached on 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (703) 308-4896. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-4900.

Manish S. Shah  
Examiner  
Art Unit 2853

  
MSS  
9/15/03